The line of division between procedural and representational management of interface information

This talk examines the balance of the basic ingredients that are needed for an adequate theory of how extra-phonological information is processed in phonology. Following the by now well established modular view of cognitive and linguistic architecture, morpho-syntax and phonology "do not see" each other, nor even know of each other's existence. Therefore, any intermodular communication must be managed by some external entity, which I call the Translator's Office (SPE's readjustment, Prosodic Phonology's mapping rules, Jackendoff's correspondence rules). In all models of the interface that recognise a Translator's Office, this device does two things (even though the division at hand often remains non-explicit): it decides on "chunk-submission" (roughly speaking, the phonological cycle, more on that below) and the translation of morpho-syntactic objects into phonological objects. The former activity is purely procedural, while the output of the latter is representational.

There is general agreement that the representational output may not be any kind of diacritic (although theories do not always follow this request). The ban on diacritics follows from modularity: each module speaks its own language (of the brain), and hence only understands what it is told in its own idiom. As a consequence, phonology can neither make direct reference to morpho-syntactic categories, nor to non-linguistic objects such as diacritics (#, brackets, the prosodic hierarchy etc.). The output of the Translator's office can thus only be truly phonological objects - a truly phonological object is one that exists in the phonology for purely domestic reasons and in absence of any issue related to the interface.

The empirical picture of phonological processes that are sensitive to morpho-syntactic information may be meaningfully divided into two major classes, one of which has two sub-classes. The major division is between processes where the Translator's Office only decides which chunk of the string is submitted to phonological interpretation, and those where it modifies the application of a rule (blocking or triggering it). All stress-related phenomena are of the former kind, e.g. parent-hood has the same stress pattern as pèrent (and not as pèrent-al) because the stem has been submitted to phonology twice: first alone, then together with the affix (this is the phonological cycle, supplemented with the traditional principle of robustness according to which a change made on an earlier cycle cannot be undone on a later cycle).

In case the application of a phonological rule is influenced, the Translator's Office can either have a blocking or a triggering influence. Lexical Phonology and OTed versions thereof manage the former by purely procedural means (interactionism or reranking of constraints), but recur to the representational function of the Translator's Office for the latter (so-called derived environment effects): either brackets (and bracket erasure) are needed, or reference to the prosodic hierarchy is made (Stratal OT, DOT). Both are objects that come into being as the representational output of the Translator's Office.

I argue that current interface theories fail because they need to recur to diacritics for derived environment effects: SPE-type boundaries, Lexical Phonology (brackets), Kaye (1995, domain edges), Prosodic Phonology (the prosodic hierarchy) and OTed versions of Lexical Phonology (Stratal OT, DOT where brackets are replaced by units of the prosodic hierarchy).

Some argument is necessary in order to show that the prosodic hierarchy is a diacritic, if an autosegmental one: following the definition above, it is not a truly phonological object since it exists only in order to translate morpho-syntactic structure into phonology - exactly the purpose of #, + and the like. Also, it is irrelevant for domestic phonology in absence of any issue related to the interface.

The division that I propose between procedural and representational management of interface phenomena is different: while the purely procedural type (illustrated by parent-hood above) remains as it is, any modification of the application of a rule is the result of a representational
activity: an object has been added to the lexical ingredients of the phonological string. Also unlike other theories, I argue that the representational output of the Translator's Office are only objects which already exist in phonology in absence of any issue related to the interface. The resulting theory is called Direct Interface because it does not go through any placeholder when morpho-syntactic information is translated into phonology. Rather, the output of the Translator's Office is an already existing category. Obviously, the nature of this category depends on the particular phonological theory used. Therefore different theories make different predictions and may be evaluated according to their behaviour at the interface. This is a desirable effect which other interface theories, precisely because they do not engage truly phonological entities, do not offer.

I then show how the particular phonological theory that I am working in, CVCV, implements the direct request: for reasons that are made explicit, the output of the Translator's Office can be four and only four different objects: Government of final empty Nuclei (FEN), ability for FEN to govern and to license and the insertion of an empty CV unit. This very restrictive set of possibilities is claimed to be able to account for all phenomena that modify the application of a process. Finally, I illustrate the fact that on this account, a clear line of division between procedural and representational interface effects emerges: the former concern only stress, while everything that is traditionally called sandhi falls under the scope of the latter.